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994 CASES OF FERGUSON HEMORRHOIDECTOMY: 10-YEARS' EXPERIENCE OF A SINGLE SURGEON

FERGUSON HEMOROİDEKTOMİ 994 OLGU; TEK CERRAHIN 10 YIILIK DENEYİMİ

FERGUSON HEMORRHOIDECTOMY

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Öz

Amaç: Prolabe internal hemoroidli hastalarımızda yapmış olduğumuz Ferguson Hemoroidektomi usulü hemoroidektomi ameliyatının sonuçlarını değerlendirmek. Gereç ve Yöntem: Ocak 2002-Ocak 2012 tarihleri arasında, Ferguson Hemoroidektomi tekniği uygulanan 994 hasta çalışmaya alındı. Hastaların dosya kayıtları incelenerek; şikâyetleri, anorektal yandaş hastalıkları, operasyon bulguları, postoperatif erken ve geç komplikasyonları kaydedildi. Bulgular: Olguların %70'i erkek ve ortalama yaş 47 (18–79) idi. Şikâyetleri 1 ay ile 5 yıl arasında var olup sıklık sırasına göre ele gelen pake, kanama ve ağrı idi. %74'ünde pakeler klasik (saat 3.7.11) yerleşimliydi. Çoğunluğu (%68) grade 4 hemoroid idi. Hastalarımızın %23'ünde yandaş anorektal hastalık olarak anal fissür mevcuttu. Hepsi genel anestezi altında ve litotomi pozisyonunda ameliyat edildi. Ferguson tekniği için ameliyat süresi ortalama 25 dk, hastanede kalış süresi 2 gündür. Postoperatif dönemde 102 hastada erken komplikasyon gelişti. 50 hastada şiddetli ağrı (%4,2), 17 hastada kanama (%1,7), 38 hastada (%3.9) idrar retansiyonu görüldü. Dokuz hastada geç dönemde komplikasyon gelişti. İki hastada anal stenoz, altı hastada anal fissür, bir hastada anal fistül-apse gelişti. Hiçbir hastada inkontinans olmadı ve nüks gözlenmedi. Tartışma: Ferguson Hemoroidektomi (KFH) tekniği hemoroid cerrahisinde halen en çok uygulanan tekniktir. Bizler KFH'nin efektif ve güvenilir bir yöntem olması nedeniyle tercih edilebilir olduğu sonucunu desteklemekteyiz.

Anahtar Kelimeler

Ferguson Hemoroidektomi Tekniği; Hemoroidektomi; Hemoroid

Abstract

Aim: To evaluate the outcomes of hemorrhoidectomy surgeries performed by the Ferguson Hemorrhoidectomy (FH) method in patients with prolapsed internal hemorrhoids. Material and Method: A total number of 994 patients who had undergone Ferguson Hemorrhoidectomy between January 2002 and December 2012 were included in this study. Patients' medical files were reviewed and data including their complaints, concomitant anorectal diseases, operation findings, and postoperative early- and late-term complications were recorded. Results: Of all the cases, 70% were men and the mean age was 47 (18–79) years. Symptom duration ranged from 1 month to 5 years and the most common symptoms in order of frequency, were palpable lumps, bleeding, and pain. Piles had the usual (clock 3.7.11) localization in 74% of the cases. The majority of the patients (68%) had grade 4 hemorrhoids, and 23% had anal fistula as a concomitant anorectal disease. All patients were operated on under general anesthesia and at the lithotomy position. The mean duration of the operation using the Ferguson technique was 25 minutes, and the mean duration of the hospital stay was 2 days. During the postoperative period, 102 patients developed early-term complications. Of these patients, 50 (4.3%) had severe pain, 17 (1.7%) had bleeding, and 38 (3.9%) had urinary retention. Nine patients developed complications in the long term; of these, 2 had anal stenosis, 6 had anal fistula, and 1 patient had anal fistula-abscess. Incontinence or recurrence was not noted in any patient. Discussion: Ferguson Hemorrhoidectomy (FH) is still the most commonly used procedure for hemorrhoid surgery. Our findings support that FH is an effective and safe procedure, thus representing a preferable option.

Keywords

Ferguson Hemorrhoidectomy Technique; Hemorrhoidectomy; Hemorrhoid

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Introduction

Hemorrhoids are normal structures localized in the anal canal. These structures, called the anal cushions, normally contribute to continence by acting as plugs during rest. They also prevent traumatization of the anal canal during defecation. Symptomatic changes of the anal cushions are called 'hemorrhoid disease' or 'hemorrhoidal disease.' Its incidence increases with age, and its prevalence was reported to vary between 2.9-27.9% [1]. Cases of hemorrhoid disease are commonly encountered in daily clinical practice, and hemorrhoidectomy procedures account for almost 7% of all surgeries. In the present study, outcomes of FH operations performed on 994 patients in our clinics over a 10-year period were retrospectively evaluated.

Material and Methods

Medical records and patient follow-up forms of patients who underwent the FH procedure in our clinics due to grade 3 and 4 hemorrhoids between 2002 and 2012 were reviewed, and their symptoms at admission, concomitant anorectal diseases, and postoperative early- and late-term complications were prospectively recorded.

The applied FH procedure is based on the following principles: the hemorrhoid pile is dissected up until the pedicle (Figure 1), ligated at its radix (high ligation) (Figure 2), and excised (Figure 3), after which the wound is closed by sutures (Figure 4).

In order to avoid anal stenosis during excision, attention must be given to leave sufficient and healthy mucosal ponticulus between the piles. The patients were asked to attend follow-up visits every other day during the first 15 days after discharge. All patients were asked about their complaints at the end of the first and the third months, and at the end of the first year. After the first year, patients' complaints were followed-up by telephone contacts or through face-to-face interviews. Patients were requested to return for an examination if there was any problem in the anorectal region.

Results

In total, 994 patients underwent FH during the ten-year period of the study. Of all patients, 70% (695) were men and the mean age was 47 (18–79) years. The duration of the patients' clinical complaints ranged from 1 month to 5 years and the most common complaints in order of frequency, were palpable lumps, bleeding, pain, itching, discharge, and anemia (Table 1). Of the patients, 97% had multiple nodules and 25 patients had a single pile. Piles had the usual (clock 3.7.11) localization in 74% of the cases. The majority of the patients (68%) had grade 4 hemorrhoids. All patients were operated on under general anesthesia and at the lithotomy position. Hemorrhoids can occur as a stand-alone disease but they may also be accompanied by other benign anorectal diseases.

In this study, 23% of the patients had anal fistula as a concomitant anorectal disease. In addition to Ferguson Hemorrhoidectomy, lateral internal sphincterotomy or rectus operations were also carried out in some cases (Table 2). The mean duration of operation for FH technique was 25 minutes (6-38 minutes), and the mean duration of hospital stay was 2 days. During the postoperative period, 105 patients (8.6%) developed early-term complications. Of these patients, 50 (4.2%) had severe pain, 17 (1.7%) had bleeding, and 38 (3.9%) had urinary retention (Table 3). During a mean follow-up period of 5 years (6 months – 120 months), 9 patients (0.9%) developed late-term complications; of these, 2 had anal stenosis, 6 had anal fistula, and 1 patient had anal fistula-abscess (Table 4). All patients were followed-up for at least 1 year (1 year – 10 years), and incontinence or recurrence was not noted in any patient.

Table 1. Clininicals Symptoms of Patients

Symptoms	Number of Patients (%)
Nodule	944(95)
Bleeding	884 (89)
Pain	228(23)
Itching	178 (18)
Mucoid Discharge	119(12)
Anemia	9 (1)

Table 2. Implementation of additional surgical techniques.

Surgical Technique	Number of Patients (%)
FH	874(88)
FH + LIS	695(7)
FH + Recluse	49(5)
Total	994

Ferguson Hemorrhoidectomy: FH, lateral internal sphincterotomy: LIS

Table 3. Early Postoperative Complications .

Early Complications	Number of Patients (%)
Severe Pain	50(4.2)
Bleeding	17 (1.7)
Urinary Retention	38(3.9)

Table 4. Late complications.

Late Complications	Number of Patients (%)
Anal Stenosis	2 (0.24)
Anal Abscess-Fistula	1 (0.12)
Anal Fissure	6 (0.6)
İncontinence	0
Recurrence	0

Discussion

Conventional surgical hemorrhoidectomy is based on excision of hemorrhoid cushions and is generally recommended for grade 3 and 4 hemorrhoids. The FH technique is at the forefront of the conventional excisional techniques that constitute the current standard surgical treatment of hemorrhoid disease [1-8].

FH is the primary technique we also prefer in our clinics for the surgical treatment of grade 3 and 4 hemorrhoids. We prefer reklus method for the secondary hemorrhoid nodules that we encounter while performing FH. Lateral internal sphincterotomy (LIS), on the other hand, was performed in cases having anal fistula as a concomitant pathology.

Although FH is an effective technique, postoperative early-term urinary retention, hemorrhage, and pain are significant complications of this procedure [1]. In their study, Shaikh et al. compared the outcome of Milligan-Morgan (MMH) and Ferguson (FH) techniques for hemorrhoidectomy with regard to postoperative pain, control of bleeding, early mobilization of patients, and wound healing. They found that the closed technique is more beneficial with respect to postoperative pain, control of bleeding, early mobilization of patients, and wound healing [22]. In particular, among all surgical interventions, hemorrhoidectomy is the procedure associated with the highest rate of postoperative pain. Therefore, studies and innovative techniques focus on reducing postoperative pain [9-11].

In their study, Bota et al. assessed the clinical consequences of stapled hemorrhoidectomy, comparing results with other published literature regarding postoperative pain, bleeding, incontinence, and other complications. Hospitalization time ranged between 1 and 3 days (median time was 34 hours). Seventy-eight patients were discharged on the first postoperative day, without severe pain, and the remaining 42 patients were discharged on the third day. Two cases of postoperative pain and thrombosis were found as postoperative complications [23]. In our study, the mean duration of the FH operation was 25 minutes (6-38 minutes), and the mean duration of hospital stay was 2 days. During the postoperative period, 105 patients (8.6%) developed early-term complications. Of these patients, 50 (4.2%) had severe pain, 17 (1.7%) had bleeding, and 38 (3.9%) had urinary retention. During a mean follow-up period of 5 years (6 months – 120 months), 9 patients (0.9%) developed late-term complications; of these, 2 had anal stenosis, 6 had anal fistula, and 1 patient had anal fistula-abscess.

In the study by Majeed et al. [24], the incidence of early postoperative complications including haemorrhage, infection, and urinary retention was 4.94%, 8.24%, and 7.14%, respectively. In our study, during the postoperative period, 105 patients (8.6%) developed early-term complications. Of these patients, 50 (4.2%) had severe pain, 17 (1.7%) had bleeding, and 38 (3.9%) had urinary retention.

The prospect of postoperative pain can discourage patients from choosing surgical treatment for their hemorrhoids, resulting in treatment delay. In our clinics, analgesics were regularly administered to the patients during the postoperative first 24 hours and the rate of unendurable pain was found to be 4.2% (50 patients). While the etiology of post-hemorrhoidectomy pain is still not fully understood, the majority of the patients suffering from pain were reported to be young men who experienced severe anxiety during the preoperative period [12].

Although the initial studies investigating the circular stapled hemorrhoidopexy, a method that is preferred to reduce postoperative pain and increase patient satisfaction, demonstrated reduced pain and higher patient satisfaction, Cochrane Reviews of this method performed in the following years showed that it was actually not that effective and was associated with high rates of recurrence, rectal prolapse, and hemorrhoidal symptoms [3,13,14].

Instead of conventional use of scalpels and scissors, hemorrhoidectomy can also be performed using other sharp objects (harmonic scalpel, laser, ultrasonic diathermy, Ligasure) [6,9,15]. However, despite the advantages of using these tools (less bleeding and reduced pain due to less tissue damage), surgeons continue to prefer scalpels and scissors because the newer tools are costly, are not widely available, and studies have not shown a remarkable difference in effectiveness [16,17].

Use of the bipolar electrothermal sealing device (Ligasure-M) for hemorrhoidectomy was reported to cause less pain, but long-term follow-up is required in terms of hemorrhoid recurrence [12]. Regarding early-term complications, no significant difference was noted compared to the other series. Internal anal sphincter spasm plays a role in the development of hemorrhoid disease and can even be the underlying cause of the anal pain after hemorrhoidectomy.

Therefore, it might have potential effects on early-term complications such as pain, urinary retention, and anal stenosis [10,18,19]. Application of diltiazem pomade after hemorrhoidectomy has also been reported to reduce pain [10].

In this study, LIS was performed along with FH in 58 patients with hemorrhoids accompanied by anal fistula, and none of these patients experienced pain. Urinary retention is one of the most frequently reported early-term complications (2-30.6%) [1,20].

In our patient group, 3.9% developed urinary retention; most of these cases were resolved by heat application and recommendations. Most bleedings, which occur at a rate of 0.03-6% within the postoperative first 24 hours, develop due to technical errors and usually require surgery.

In our study, 2 patients experienced early-term bleeding; one of them was taken into emergency surgery and the pedicle was re-sutured, while bleeding was controlled by wound exploration and tight bandages in the other patient. Late-term bleedings that occur during postoperative 5th -10th days (0.5-4%) develop due to early detachment of the sutured pedicle. Re-surgery, or methods such as balloon tampon or packing can be preferred in such cases. Wound healing after hemorrhoidectomy can result in anal fistula as observed in our study (1-2.6%), while the rate of anal fistula development was reported to be higher (6.3%) after stapled hemorrhoidopexy [21].

Dietary recommendations should be given to the patients in order to avoid postoperative constipation. Dietary modifications and local anesthetics provided effective treatment in 6 patients with anal fistula in this study. The most feared complication is anal stenosis (0-6%) [20]. In this study, both patients who developed anal stenosis had 3 hemorrhoid piles and they had returned for only one follow-up visit within the first 15 days after the procedure. They had trouble implementing rectal palpation although they were provided with the necessary training.

It is therefore important to leave healthy mucosa ponticulus and perform rectal palpation for control during the postoperative early-term. In our clinics, all patients who have undergone hemorrhoidectomy are regularly checked during postoperative 15 days, and thereafter on the postoperative first and third months and at the end of the first year. They are also advised to refer to our clinics in case they experience any anorectal symptoms.

The choice of a successful treatment approach for hemorrhoid disease should be based on the assessment of hemorrhoid symptoms and recurrence that might occur years after the procedure, rather than the early-term complications [1]. Previous studies have reported that anal incontinence can develop at a rate of 0-12% after hemorrhoidectomy. However, we did not encounter any case of anal incontinence in our patient group [20]. The FH technique, which is considered the best method to treat hemorrhoids and also the method we prefer in our clinics, was confirmed to be effective and none of the patients developed incontinence or recurrence in this study.

Conclusion

In conclusion, at this point in time when studies are being performed to develop technological tools to ensure that hemorrhoids disease can be treated with high patient satisfaction, low rate of early-term complications, and low rate of long-term complaints such as recurrence and prolapsus, FH appears to be one of the best surgical approaches for the treatment of grade 3 and 4 hemorrhoidal disease.

Competing interests

The authors declare that they have no competing interests.

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